CLEAR LAKE WATER QUALITY PROJECT

January, 2006

Clear Lake Background Information:

- Iowa's 3rd largest natural lake
- Listed on Iowa's 2004 303(d) Impaired Waters List
- Suffers from intense summer algae blooms which reduce water clarity to < 1ft.
- Impaired water quality does not allow lake to reach full ecological, recreational, and economic potential

Clear Lake Water Quality Projects to Date:

- $600,000 State funded ISU study conducted in 1998-2000 to develop restoration plan
- 1,400 acres of agricultural land in Clear Lake watershed enrolled in Nutrient and Pesticide Management program.
- 500 acres of wetlands restored in agricultural areas of the Clear Lake watershed
- 11 storm water improvement projects installed in developed areas
- 800 ft of shoreline stabilization

Local Commitment to Improving Water Quality

- $1 million spent on storm water improvements
- $ 800,000 spent on land acquisitions to retain natural areas near lake
- $4 million commitment to dredging project

Future Needed Water Quality Activities:

- Dredging of Clear Lake via State/Local partnership ($13 million)
- Restoration of Ventura Marsh via Corps of Engineers funding ($2 million)
- Continued watershed improvements via State/Local/Federal partnership ($3-5 million)

Dredging Project Funding Request:

- State of Iowa: $9,000,000
- Local Government Cost Share: $3,000,000
- Private Cost Share: $1,000,000
- Total Project Cost: $13,000,000

Dredging Project Details:

- Proposed project based on ISU/IDNR Clear Lake Diagnostic and Feasibility Study recommendation
- Remove 2.3 million cubic yards of accumulated sediment from "Little Lake" portion of Clear Lake (Figure 1)
- Increase depth of "Little Lake" area from 6 feet to 28 feet
- Sediment removed would fill a 200 acre site 10 feet deep

Dredging Project Timeline:

- 2006: Perform Engineering and Design
- 2007: Secure and Construct Dredge Spoil Containment Site
- 2008: Commence Dredging
- 2009: Finalize Dredging

Cost Effectiveness of Dredging Project:

- Clear Lake currently provides an estimated $60 million annually to the State and local economies (ISU, 2001)
- Clear Lake would provide an additional $30 million annually to the State and local economies if water quality is improved (ISU, 2001)
- Total Investment in the dredging project by State is one time cost of $9 million

Longevity of Dredging Project:

- Significant watershed improvements have been made leading to a 2,400 tons/year reduction in soil loss to Clear Lake
- Clear Lake watershed is very small (8,500 acres) which leads to low potential for erosion into Clear Lake
- Clear Lake watershed is relatively flat which leads to low potential for erosion into Clear Lake
- These factors combine to ensure dredging will be a long term solution at Clear Lake

Benefits of Dredging Project:

- 64% of the phosphorus in water entering dredge portion of lake removed (ISU, 2001)
- Increased water clarity, aquatic vegetation and fish habitat
- Increased recreational opportunities and quality of life for Iowan's
- Increased revenue for the State and local economies

Figure 1. Proposed Dredging Project Location: